

REMARKS

Claims 1-71 are presently pending. No claims have been canceled. Claims 17-55 have been withdrawn. Claims 56-71 have been added. Claims 1, 8, 14, and 16 have been amended. Reconsideration in light of the following remarks is respectfully requested.

Rejection under 35 U.S.C. 102

The Examiner rejected claims 1-3, 5, 8-10, 12, 14 and 15 under 35 U.S.C. 102(e) as being anticipated by Goodson, Jr. et al. '470. The rejection is respectfully traversed.

A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The claims, as amended, are not anticipated by the '470 Patent because at least one of the claimed elements are not taught therein. Independent claims 1, 8, and 14 have been amended to require the limitation that "said magnetic field acts substantially perpendicular to a pressure gradient." Such limitation is not disclosed in the '470 Patent. For example, referring to Figure 1 at the '470 Patent, the electromagnetic winding **20** is energized by a battery **24** to polarize the controllable fluid. When the electromagnet winding **20** is energized, a toroidal magnetic field, substantially parallel to the direction of the pressure gradient, is produced.

The present invention, on the other hand, teaches a magnetic field that acts substantially perpendicular to the pressure gradient. For example, the magnetic assembly **522** depicted in **Figure 5** of the instant patent application produces a magnetic field that is substantially perpendicular to the pressure gradient. Thus, because the '470 Patent fails to disclose the magnetic field that acts substantially perpendicular to the direction of the pressure gradient, the '470 Patent fails to anticipate claims 1-3, 5, 8-10, 12, 14 and 15 of the claimed invention. Nor does the '470 Patent teach or suggest such a limitation. Applicant respectfully requests that Examiner withdraw the rejection as to claims 1-3, 5, 8-10, 12, 14 and 15.

Additionally, with respect to claims 3 and 10, the Examiner, without citation to any references, asserts that "Total blockage of the flow stops the piston while partial blockage due to

the fluid will slow movement of the piston, as is the nature of MR fluids.”¹ The present patent application teaches that, “A Magnetic assembly 722 can produce a magnetic field through the tube 718, to either slow or stop the progress of the piston through the fluid.”² However, the Goodson et al. ‘470 Patent fails to appreciate, fails to teach, and fails to disclose that varying the magnetic field can produce partial blockage of the MR fluid through the housing which can slow the movement of the piston. Anticipation focuses on whether a claim reads on the product or process a prior art reference discloses, not on what the reference broadly teaches. *Kalman v. Kimberly-Clark Corp.*, 713 F.2d 760, 218 U.S.P.Q. 781 (Fed. Cir. 1983). The Goodson et al. ‘470 Patent discloses only the fluid is “either highly viscous or a solid when a small magnetic field is applied.” (Col. 2, lns. 26-27). Thus, because the ‘470 Patent fails to disclose the magnetic field can be raised to slow the movement of a piston, the ‘470 Patent fails to anticipate claims 3 and 10 of claimed invention. Nor does the ‘470 Patent teach or suggest such a limitation. Applicant respectfully requests that Examiner withdraw the rejection as to claims 3 and 10.

Examiner had indicated that claim 16, if rewritten in independent form, was in condition for allowance. Claim 16 has been rewritten in independent form and it is believed that claim 14 is in condition for allowance. Applicant respectfully requests that Examiner withdraw the rejection as to claim 14.

Rejection under 35 U.S.C. 103

The Examiner rejected claims 4, 6, 11, and 13 under 35 U.S.C. 103(a) as being unpatentable over Goodson, jr. et al. ‘470 in view of Yezersky et al. The rejection is respectfully traversed.

The Examiner indicates that it “would have been obvious to one of ordinary skill in the art at the time the invention was made to use the activation system of Yezersky et al. with the apparatus of Goodson, Jr. et al ‘470 . . . so that power would not have to be constantly supplied downhole and a current would only be required when it was desired to activate the apparatus.”³

1 Office Action mailed 12/06/04, p. 2, ¶3

2 Orig. Pat. App., p. 12

3 Office Action mailed 12/06/04, p. 3, ¶5

A proper *prima facie* case of obviousness cannot be established by combining the teachings of the prior art absent some teaching, incentive, or suggestion supporting the combination. *In re Napier*, 55 F.3d 610, 613, 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995); *In re Bond*, 910 F.2d 831, 834, 15 U.S.P.Q.2d 1566, 1568 (Fed. Cir. 1990). In determining whether particular references might be properly combined, whether it is obvious to try a combination is not a legitimate test. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988). The test is whether the combination of the references or modification would be obvious to do rather than obvious to try. *In re Deuel*, 51 F.3d 1552, 1559, 34 U.S.P.Q.2d 1210, 1216 (Fed. Cir. 1995). A general incentive does not make obvious a particular result, nor does the mere existence of techniques which may be carried out to achieve the particular result. *Id.* A proper *prima facie* case of obviousness requires that the prior art reveal a reasonable expectation of success carrying out the proposed combination or modification. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). Both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. *Id.* At best, the proposed motivation for combining the teachings of Goodson, Jr. et al. '470 with Yezerky et al. constitutes a statement of why the combination is obvious to try. Nothing in those references suggests a reasonable expectation of success. For example, the section of Yezerky cited by the Examiner⁴, merely discusses the operation of the permanent magnet 26. It does not suggest using such a magnet to avoid having to supply a current as Examiner suggests. Further, Yezerky is for use in an "essentially closed system"⁵ bounded between one and sometimes two plungers 14,16.⁶ Its unclear to the applicant how the cited section of Yezerky, which pertains to moving parts in an essentially closed, plunger-type system in motor vehicles, would motivate someone to use a permanent magnet in a downhole bore.

Applicant respectfully requests that Examiner withdraw the rejection as to claims 4, 6, 11, and 13.

The Examiner rejected claims 1-15 under 35 U.S.C. 103(a) as being unpatentable over Burleson in view of Yezerky et al. The rejection is respectfully traversed.

The Examiner indicates that it "would have been obvious to one of ordinary skill in the art

⁴ Fig. 2, col.3 lines 25-41

⁵ Col. 2, line 47

⁶ Col. 2, line 52

at the time the invention was made to use the activation system and MR fluid of Yezersky with the apparatus of Burleson et al. . . . to allow activation of the apparatus from the top of the borehole with a more reliable system that is electrically based as opposed to temperature based.”⁷

A proper *prima facie* case of obviousness cannot be established by combining the teachings of the prior art absent some teaching, incentive, or suggestion supporting the combination. *In re Napier*, 55 F.3d 610, 613, 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1995); *In re Bond*, 910 F.2d 831, 834, 15 U.S.P.Q.2d 1566, 1568 (Fed. Cir. 1990). In determining whether particular references might be properly combined, whether it is obvious to try a combination is not a legitimate test. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1599 (Fed. Cir. 1988). The test is whether the combination of the references or modification would be obvious to do rather than obvious to try. *In re Deuel*, 51 F.3d 1552, 1559, 34 U.S.P.Q.2d 1210, 1216 (Fed. Cir. 1995). A general incentive does not make obvious a particular result, nor does the mere existence of techniques which may be carried out to achieve the particular result. *Id.* A proper *prima facie* case of obviousness requires that the prior art reveal a reasonable expectation of success carrying out the proposed combination or modification. *In re Vaeck*, 947 F.2d 488, 493, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991). Both the suggestion and the reasonable expectation of success must be found in the prior art, not in the applicant's disclosure. *Id.* At best, the proposed motivation for combining the teachings of Yezersky with Burleson et al. constitutes a statement of why the combination is obvious to try. Nothing in those references suggests a reasonable expectation of success.

Regarding claims 4, 6, 11, and 13, as stated above, the section of Yezersky cited by the Examiner⁸, merely discusses the operation of the permanent magnet 26. Further, the operation appears to be limited to essentially closed systems where the MR fluid is located in a plunger type system.⁹ It does not suggest using such a magnet to provide a system that is more reliable than a temperature-based system as Examiner indicates. Similarly, Burleson et al. fails to indicate that a temperature-based system is unreliable or undesirable. It merely indicates that the “eutectic alloy selected for a given application will depend on a variety of different temperature factors.”¹⁰ The Examiner's failure to provide the necessary suggestion or motivation for the combination of Yezersky with Burleson et al., other than the aforementioned assertion, creates a

⁷ Office Action mailed 12/06/04, p. 4, ¶6

⁸ Fig. 2, col.3 lines 25-41

⁹ See Col. 2, lines 45-52.

¹⁰ U.S. Pat. No. 5,223,665, Col. 6, lns 16-36.

presumption that the combination was selected by Examiner to support the obviousness rejection based on improper hindsight. A determination of the desirability of combining prior art references must be made without the benefit of hindsight afforded by the Applicant's disclosure. *In re Paulsen*, 30 F.3d 1475, 1482, 31 U.S.P.Q. 1671, 1676 (Fed. Cir. 1994). Thus, even if the Yezersky Patent could be combined with the Burleson et al. Patent in the manner suggested by the Examiner, the modification or combination is not obvious, because neither Yezersky nor Burleson et al. suggest or teach the desirability of the modification. Thus, the claimed invention may only be reached using the presently claimed invention as a template to piece together and modify the teachings of Yezersky nor Burleson et al. to teach the presently claimed invention. Such reliance is an impermissible use of hindsight with the benefit of Applicant's disclosure. Thus, it is respectfully submitted that Examiner has not established a *prima facie* case of obviousness and the rejection of claims 4, 6, 11, and 13 should be withdrawn.

Additionally, regarding claims 3 and 10, the cited references fail to teach or suggest a way to slow the movement of the piston by partial blockage of the MR fluid. All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In comparing Burleson et al and Yezersky to the claimed invention to determine obviousness, limitations of the presently claimed invention may not be ignored. Claims 3 and 10, as amended, requires that "partial blockage of the flow of magnetorheological fluid through said housing by a magnetic field slows movement of said piston." The present patent application teaches that, "A magnetic assembly 722 can produce a magnetic field through the tube 718, to either slow or stop the progress of the piston through the fluid."¹¹ Examiner, without citation to any reference, states that "Total blockage of the flow stops the piston while partial blockage due to the fluid will slow the movement of the piston, as is the nature of transitional materials."¹² The Yezersky, however, fails to appreciate, fails to teach, and fails to disclose that the flow of the MR fluid through the housing can be adjusted to slow the movement of the piston. Rather, Yezersky teaches only about "switching between the liquid and solid states of the MRF 12, to allow for either adjustment or position lock."¹³

¹¹ Orig. Pat. App., p. 12

¹² Office Action mailed 12/06/04, p. 2, ¶3

¹³ U.S. Pat. No. 6,514,001, col. 5, lns. 28-31.

Further, regarding claim 7, the cited references fail to teach or suggest a time delay. All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In comparing Burleson et al and Yezerksy to the claimed invention to determine obviousness, limitations of the presently claimed invention may not be ignored. The present invention in claim 7 recites that the "movement of said piston is controlled to provide a time-delay." Such a feature is not taught or suggested by Burleson et al nor Yezerksy. Therefore, claim 7 is not obvious in view of Goodson, Jr. et al '470 or Yezerksy.

In view of the above, Applicant respectfully submits that the rejection of claims 1-15 is overcome. Accordingly, it is respectfully urged that the rejections of claims 1-15 not be sustained.

CONCLUSION

It is respectfully urged that the subject application is now in condition for allowance. The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



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Date: 3/1, 2005

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